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09/900,211	07/06/2001	David D. Bohn	10003357-1	6278

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EXAMINER
NGUYEN, FRANCIS N

ART UNIT	PAPER NUMBER
2674	6

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/900,211	BOHN, DAVID D.	
	Examiner	Art Unit	
	FRANCIS NGUYEN	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The amendment filed on 4/22/2003 is entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation "time-delayed shut off switch" (page 18, claim 9, line 2) must be shown or the feature(s) canceled from the claim(s) 9. No new matter should be entered.

It is noted that figure 1 fails to show distinction between the elements 10 and 12.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 15, 16 are objected to because of the following informalities: incorrect word "comprising" in claims 15-16, Amendment A, page 16, (because a computer pointing device cannot comprise a bigger element like a system associated with itself) . Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "the operating mode indicator apparatus" in Amendment A, page 15, claim 8, line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the operating mode indicator apparatus" in Amendment A, page 15, claim 9, line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 8-9, 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonough et al. (US Patent 6,486,873).

As to **claims 1 and 18**, McDonough et al. discloses a computer-pointing device (**track-mouse device 10**, column 3, lines 44-47) and associated method comprising:

a first illumination apparatus operatively associated with the computer-pointing device, said first illumination apparatus generating light (**illumination device 14**, column 4, lines 45-46) when the computer-pointing device is in a first operating mode (ON mode, column 7, lines 55-57, computer ON implying track-mouse device is ON, column 5, lines 65-67) , the light

generated by said first illumination apparatus providing for a user a visual indication of the first operating mode of the computer-pointing device (visible in low lighting, column 4, lines 46-47, light emitted is visible , column 4, lines 65-67) ; and

a second illumination apparatus operatively associated with the computer-pointing device, said second illumination apparatus generating light (one or more illumination devices 14, column 7, lines 25-27, more than one illumination device 14, column 7,lines 39-40, this corresponds to the second illumination apparatus) when the computer-pointing device is in a second operating mode, the light generated by said first illumination apparatus providing for a user a visual indication of the second operating mode of the computer-pointing device (control program 330 to control states , degree of illumination, column 7, lines 25-29, blinking or flashing, column 7, lines 34-35, user not using computer/mouse, column 8, lines 13-16, track-mouse device power OFF state, column 7, lines 55-57). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McDonough et al. then add one more illumination apparatus to the track-mouse device to obtain the apparatus McDonough et al. modified because it would visually provide more status/information to the user .

As to **claim 2**, the computer–pointing device of claim 1, wherein the computer-pointing device comprises a mouse (column 3, lines 33-34).

As to **claim 3**, the computer–pointing device of claim 1, wherein said first illumination apparatus comprises a light emitting diode (**LED** , column 4, line 45), and wherein said second illumination apparatus comprises a light-emitting diode (**LED**, column 4, line 45).

As to **claim 4**, the computer-pointing device of claim 1, wherein said first illumination apparatus generates light having at least one attribute different than the light generated by said second illumination apparatus (**color attribute** , column 4, lines 55-56).

As to **claim 5**, the computer-pointing device of claim 1 wherein a first illumination apparatus generates light when the computer-pointing device is not being moved, and wherein said second illumination apparatus generates light when the computer-pointing device is being moved. Note computer processing unit 310 in association with track-mouse control program 330 can control different states of one or more illumination devices (column 7, lines 24-34), and since the illumination device changes states in response to condition/occurrence to notify the user (column 8, lines 49-53) , since track mouse 10 in figure 5 is in either state (cursor movement control function, column 3, lines 45-48) or being idle , therefore it is obvious to one skilled in the art that one or more illumination devices 14 be utilized to notify the user when said track-mouse is in either states (immediate visual status of computing equipment).

As to **claims 6 and 19**, the computer-pointing device of claim 1, further comprising a third illumination apparatus operatively associated with the computer-pointing device, said third illumination apparatus generating light when the computer-pointing device is in a third mode (since McDonough et al. does suggest one or more illumination devices and associated states , one skilled in the art would opt to add a third illumination apparatus to immediately provide more visual status/information to the user.

As to **claim 8**, the computer-pointing device of claim 1, further comprising a switch, said switch allowing the user to disable the device (user can be given the option of overriding the changing of the states, column 7, lines 43-44 , also power can be controlled in response to a particular

condition, column 7, lines 58-59, these imply that time-delayed shut-off switch is inherent to disable the a0pparatus in order to be energy-saving compliant).

As to **claim 9**, the computer -pointing device of claim 1 discloses a time-delayed shut off switch, said time-delayed shut off switch causing the device be shut off after a period of inactivity (power can be periodically switched off or on, in response to a particular condition, column 7, lines 45-46, lines 58-59, this implies that time-delayed shut-off switch is inherent to power off the apparatus in order to be energy-saving compliant).

As to **claim 15**, the computer–pointing device of claim 1, is operatively associated with a data processing system (computer 200 in figure 5 processing mouse signal from track-mouse 10) , said data processing system receiving a data signal from the computer-pointing device that is indicative of the operating mode of the computer-pointing device (mouse 10 shown in figure 6), said data processing system processing the data signal (column 4, lines 15-18) so that said first illumination apparatus generates light when the computer-pointing device is in the first operating mode (normally power ON state of track-mouse, column 5, lines 55-56) and so that said second illumination apparatus generates light when the computer-pointing device is in the second operating mode (power OFF state of track-mouse, column 5, lines 55-56).

As to **claim 16**, the computer–pointing device of claim 1, is operatively associated with a control system, said control system actuating said first illumination apparatus when the computer-pointing device is in the first operating mode, said control system actuating said illumination apparatus when the computer-pointing device is in the second operating mode (

processing unit 310 control states whether illumination device is ON or OFF, column 7, lines 24-30, also power ON/OFF correspond to the claimed first and second operating mode).

As to **claim 17**, the computer–pointing device of claim 1, wherein said first illumination apparatus and said second illumination apparatus comprise a single illumination apparatus(LED with a variable multicolored light source, column 4, lines 57-58).

As to **claim 20**, McDonough et al. discloses a computer-pointing device (**track-mouse device 10**, column 3, lines 44-47) , comprising:

means for providing for a user a first visual indication (illumination device 14, column 4, lines 45-46) that the computer-pointing device is in a first operating mode (power ON, column 7, lines 55-57); and

means for providing for the user a second visual indication that the computer-pointing device is in a second operating mode (mouse in OFF state, column 7, lines 56-57). Since McDonough et al. teaches one or more illumination devices 14 (column 7, lines 26-27), it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McDonough et al. then add one more illumination devices to the track-mouse device 10 to obtain the apparatus McDonough et al. modified because it would immediately provide more visual status/information of the computing hardware to the user.

As to **claim 21**, McDonough et al. discloses a computer-pointing device (track-mouse device 10 in figure 5), comprising:

a cursor movement control device (ball 16 of **mechanical sensing system** , column 3, lines 58-60), said cursor movement control device allowing a user to move a cursor on a

display apparatus (monitor 207 in figure 5) operatively associated with the computer-pointing device

a first illumination apparatus, said first illumination apparatus generating light (**illumination device 14 with LED**, column 4, lines 45-47) when the computer-pointing device is in a first operating mode (mouse ON state, column 7, lines 55-56), the light generated by said first illumination apparatus (illumination device 14 in figure 3) providing for a user a visual indication of the first operating mode of the computer-pointing device (mouse ON mode , column 7, lines 55-56) ; and

a second illumination apparatus , said second illumination apparatus generating light when the computer-pointing device is in a second operating mode, the light generated by said second illumination apparatus providing for the user a visual indication of the second operating mode of the computer-pointing device Since McDonough et al. teaches one or more illumination devices 14 , column 7, lines 26-27, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McDonough et al. then add one more illumination devices to the track-mouse device 10 to obtain the apparatus McDonough et al. modified because it would immediately provide more visual status/information of the computing hardware to the user. Note that mouse OFF state (column 7, lines 55-56) corresponds to the claimed second operating mode.

Claims 7, 10, 11, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonough et al. in view of Hinckley et al. (US Patent 6,559,830).

As to **claim 7**, the computer-pointing device of claim 6, wherein said first illuminating apparatus generates light when the computer-pointing device is not in contact with the user, wherein said second illumination apparatus generates light when the computer-pointing device is being moved. Note McDonough et al. discloses computer processing unit 310 can control different states of one or more illumination devices (column 7, lines 24-34) , and since the illumination device changes states in response to condition to notify the user (column 8, lines 49-53) , since track mouse 10 in figure 5 is in either state (cursor movement control function, column 3, lines 45-48 , this corresponds to the claimed computer-pointing device being moved) or being idle (this corresponds to the claimed computer-pointing not in contact with the user) as well known in the art , therefore it is obvious to one skilled in the art that one or more illumination devices 14 notify the user when said track-mouse is in those states.

However, McDonough et al. fails to teach third illuminating apparatus generating light when the computer-pointing device is in contact with the user but the computer-pointing device is not being moved . Hinckley et al. discloses touch sensor 100/102/104/106 for an input device 43 (column 5, lines 21-31). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McDonough et al. then provide touch sensor to the computer-pointing device as taught by Hinckley et al. to obtain the apparatus McDonough et al. modified by Hinclkey et al. because it will signal when the user touches the input device as taught by Hinckley et al. (column 4, lines 45-47). Again, since the illumination device changes states in response to condition/occurrences to notify the user, it is obvious to one skilled in the art that the third illuminating apparatus changes states when the user touches the track-mouse but no cursor movement is made.

As to **claim 10**, McDonough et al. fails to teach a user detection, said user-detection device detecting when the user is accessing the computer-pointing device. Hinckley et al. discloses touch sensor 100/102/104/106 for an input device 43 (column 5, lines 21-31). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McDonough et al. then provide touch sensor to the computer-pointing device as taught by Hinckley et al. because it will signal when the user touches the input device as taught by Hinckley et al. (column 4, lines 45-47).

As to **claim 11**, the computer-pointing device of claim 10, wherein said user detection comprises an optical sensor (Hinckley et al., photodiode, column 5, line 45) .

As to **claim 13**, the computer-pointing device of claim 10, wherein said user detection comprises a mechanically activated switch (Hinckley et al., switches under mouse button, column 6, lines 42-43).

As to **claim 14**, the computer-pointing device of claim 10, wherein said user detection comprises a capacitance proximity sensor (Hinckley et al., proximity sensor, column 5, line 33, line 40, lines 52-55).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonough et al. in view of Hinckley et al. and further in view of Dai et al. (US Patent 6,650,322).

As to claim 12, McDonough et al. fails to teach user detection comprising a thermal sensor. Dai et al. discloses a thermal sensor 202 (figure 2A , column 2, lines 32-35). It would have been

obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus McDonough et al. modified by Hinckley et al. then replace the touch sensor with the thermal sensor as taught by Dai et al. to obtain the apparatus McDonough modified by Hinckley et al. and Dai et al. because it would help determine user presence with accuracy as taught by Dai et al. (column 5, lines 63-65).

Response to Arguments

6. The argument filed on 4/22/2003 has been fully considered but is not found persuasive. Applicant's argument as to cited art failing to teach light source being visible to the user is not valid because McDonough et al. does teach illumination device 14 providing a visual indication to the user(figure 3).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONCLUSION

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis Nguyen **(8:00AM to 4:30PM) whose telephone number is** (703) 308-8858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709.**

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

FRANCIS NGUYEN

Examiner

Art Unit 2674

December 4th, 2003

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600